

Amendments to the Drawings:

The attached replacement drawing sheets make changes to Figs. 1, 3 and 4 and replace the original sheets with Figs. 1-4.

Attachment: Replacement Sheets

REMARKS

Claims 1-6 and 8-13 are pending in this application. By this Amendment, claim 7 is canceled without prejudice to, or disclaimer, of the subject matter recited therein. The specification, drawings and claims 1-6 and 13 are amended. No new matter is added.

I. Priority Documents

Certified copies of the priority documents were submitted concurrently with the filing of this application on November 28, 2003. As a copy of the filed formal priority document is available in the electronic file wrapper, acknowledgement of receipt of the certified copy is respectfully requested.

II. Allowable Subject Matter

The indication of allowable subject matter in claims 5 and 7 is appreciated, they being allowable if rewritten in independent form to include all of the features of their base claim and any intervening claims, as well as to address the rejection of claim 7 under 35 U.S.C. §112, second paragraph. As claim 7 is canceled, the rejection of that claim is moot. Claim 5, as well as the remaining pending claims are in condition for allowance for the reasons discussed below.

III. Drawings

The drawings are objected to for failing to comply with 37 C.F.R. §1.84(p)(5), as well as 37 C.F.R. §1.21(d). As the figures are amended in response to the objection, withdrawal of the objection to the drawings is respectfully requested.

IV. Specification

The Abstract of the specification is objected to. As the Abstract is amended in response to the objection, withdrawal of the objection is respectfully requested.

The disclosure of the specification is also objected to due to informalities. The specification is amended in response to the objection. Therefore, withdrawal of the objection to the specification is respectfully requested.

V. Claim Objections

Claims 5 and 13 are objected to for informalities. As those informalities have been addressed, withdrawal of the objection of claims 5 and 13 is respectfully requested.

VI. Claim Rejections Under 35 U.S.C. §112

Claims 3, 4 and 7 are rejected under 35 U.S.C. §112, second paragraph. As claim 7 is canceled the rejection of that claim is moot. Claims 3 and 4 are amended in response to the rejection. Accordingly, withdrawal of the rejection of claims 3 and 4 is respectfully requested.

VII. Claim Rejections Under 35 U.S.C. §103

Claims 1, 2, 6 and 9-13 are rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent Application Publication No. 2001/0012489 to Harakawa et al. (Harakawa) in view of U.S. Patent No. 5,998,903 to Umeda et al. (Umeda). The rejection is respectfully traversed.

Neither Harakawa or Umeda, whether considered alone or in combination, disclose or suggest each and every feature recited in the rejected claims. For example, the combination of references fails to disclose or suggest an electrically powered compressor of enclosed configuration, comprising . . . a stator formed of a stator core that is fixedly attached to said casing, a stator coil formed on the stator core, . . . wherein said stator coil is a segment-configuration coil formed of a plurality of coil segments each formed of an electrical conductor that is of substantially rectangular shape in cross-section, with said coil segments being mutually electrically connected in a predetermined arrangement, and said refrigerant

intake aperture(s) is located such as to blow said refrigerant through at least one of a pair of axially opposed coil end portions of said stator coil, as recited in amended claim 1.

Harakawa relates to a sealed-type electric compressor having an electric motor and a compression mechanism within a compressor housing, suitable for use in a refrigerating cycle of an automotive air conditioning system (paragraph [0003]). The electric compressor 100 includes a main shaft 109 that has an axial refrigerant passage 109b horizontally extending from the front end of the shaft 109, and a radial refrigerant passage 109c communicating with the axial refrigerant passage 109b and radially extending. Refrigerant is suctioned through a suction port 151 and introduced into the front housing 101 through the refrigerant passages 109b, 109c (paragraph [0019]; Fig. 1). Another refrigerant passage 107a is located within the middle housing 107 and communicates with a compressor chamber V which is formed between the fixed scroll plate 111 and the moving scroll plate 114.

In operation, the refrigerant suctioned through the suction port 151 is introduced into the front housing 101 through the axial passage 109b and the radial passage 109c. When the main shaft 109 rotates, the refrigerant is uniformly sprayed toward the entire coil 103. Because the radial refrigerant passage 109c is located at a refrigerant upstream side of the electric motor, the refrigerant flows toward the refrigerant passage 107a through the electric motor, thereby cooling the electric motor effectively (paragraph [0033]).

As indicated above, amended claim 1 recites that the refrigerant intake aperture is located such as to blow the refrigerant through at least one pair of axially opposed coil end portions of the stator coil. As admitted in the Office Action, Harakawa fails to disclose any such coil end portions because Harakawa fails to disclose a stator coil comprised as described in the claims. Furthermore, Harakawa only discloses that refrigerant is uniformly sprayed toward the entire coil. Thus, there is no disclosure or suggestion of refrigerant being blown through at least one of a pair of axially opposed coil end portions. Thus, Harakawa fails to

disclose a refrigerant aperture that is located such as to blow the refrigerant through at least one pair of axially opposed coil end portions of the stator coil as recited in the amended claims, i.e., through a pair of axially opposed coil ends.

Furthermore, as the fixed stator coil 102 is affixed to the front housing 101, flow of refrigerant through refrigerant flow passages 109b and 109c must pass through an area between the fixed stator core and the rotor 105. Accordingly, merely flowing refrigerant toward the refrigerant passage 107a through the electric motor fails to correspond to the features recited in the amended claims.

To overcome the admitted deficiency of Harakawa as not disclosing a stator coil having the structural features as recited in the claims, the Office Action combines Umeda and alleges that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the segment configuration coil of Umeda with the motor in the compressor of Harakawa.

Applicants assert that there is no suggestion or motivation for one of ordinary skill in the art to make the combination as alleged in the Office Action. For example, Harakawa addresses cooling an electric motor of an air conditioner effectively by using a suctioned refrigerant and arranging a refrigerant passage to improve compressor working efficiency. In contrast, Umeda relates to an alternator for an automotive vehicle. Thus, combining the structure of an alternator with an air conditioner compressor, would not have been obvious to one of ordinary skill in the art.

Furthermore, Umeda seeks to reduce the size of an alternator for an automotive vehicle while increasing power output and reducing noise levels. Thus, even were such a combination made, using a stator coil as taught by Umeda in the compressor of Harakawa would not result in the claims being rendered obvious, as the resulting combination would not disclose or suggest each and every feature in the claims, nor would there be any expectation

of success. For example, merely combining a stator coil as taught by Umeda would still not allow flow of refrigerant through at least one pair of axially opposed coil end portions, as Harakawa fails to teach any refrigerant passage which would allow the refrigerant to flow to such a location. As pointed out above, because the stator coil 102 is fixed to the housing, refrigerant cannot flow through that area. Rather, the refrigerant must flow from axial passage 109b through axial passage 109c and into an area between the rotor 105 and the fixed stator core to communicate with the refrigerant passage 107a thereby reaching the compressor portion and later passed through the exit passage 135. Therefore, due to the position of the suction port 151 and the refrigerant passages 109b, 109c, refrigerant would not flow through the coil ends.

As the combination of Harakawa and Umeda fails to disclose or suggest each and every feature recited in the rejected claims, withdrawal of the rejection of claims 1, 2, 6 and 9-13 under 35 U.S.C. §103(a) is respectfully requested.

Claims 3 and 8 are rejected under 35 U.S.C. §103(a) as unpatentable over Harakawa in view of Umeda and further in view of U.S. Patent No. 5,873,710 to Tucker. The rejection is respectfully traversed.

Claims 3 and 8 are allowable for their dependency on independent claim 1 for the reasons discussed above, as well as for the additional features recited therein. Furthermore, Tucker fails to overcome the deficiencies of Harakawa and Umeda discussed above and therefore the further combination of Tucker does not render the claims obvious. Accordingly, withdrawal of the rejection of claims 3 and 8 under 35 U.S.C. §103(a) is respectfully requested.

Claim 4 is rejected under 35 U.S.C. §103(a) as unpatentable over Harakawa and Umeda in further view of U.S. Patent Application Publication No. 2001/0036414 to Makino et al. (Makino). The rejection is respectfully traversed.

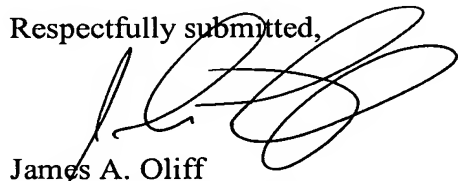
Claim 4 is allowable for at least its dependency on claim 1 for the reasons discussed above, as well as for the additional features recited therein. Furthermore, as Makino fails to overcome the deficiencies of Harakawa and Umeda discussed above, the resulting combination does not render claim 4 obvious. Accordingly, withdrawal of the rejection of claim 4 under 35 U.S.C. §103(a) is respectfully requested.

VIII. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,


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JAO:JWF/ldg

Attachments:

Amended Abstract
Replacement Sheets

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